

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-33 (Cancelled)

34. (New) A method of modulating a biological activity, comprising administering to a mammal a neuroactive peptide in an amount effective for modulating neuronal activity that mediates said biological activity, wherein said neuroactive peptide comprises the amino acid sequence:

Leu-Val-Val-Tyr-Pro-Trp-Thr-Gln-Arg-Phe, (SEQ ID NO:1)

and wherein said biological activity is facilitating learning.

35. (New) The method of claim 34, wherein said neuronal activity is selected from the group consisting of motor neuron activity, cholinergic neuron activity and neuronal development.

36. (New) The method of claim 34, in which the mammal is human.

37. (New) The method of claim 34, wherein the peptide is administered as a composition further comprising a pharmaceutically acceptable carrier.

38. (New) The method of claim 34, wherein said mammal is at risk of developing a disease or condition associated with abnormality in said biological activity, said abnormality being mediated by abnormality of said neuronal activity.

39. (New) The method of claim 34, wherein said peptide is administered in an amount effective for treating a disease or condition associated with abnormality in said biological activity, said abnormality being mediated by abnormality of said neuronal activity.

40. (New) The method of claim 34, wherein the peptide is administered intracerebrally.

41. (New) The method of claim 39, wherein the peptide administered by inhalation.

42. (New) The method of claim 39, wherein the peptide is administered intracerebrally.

43. (New) The method according to claim 39, wherein said disease or condition is selected from the group consisting of dementia; Alzheimer's disease; neuro-degenerative disorders involving one or more of cholinergic pathways, motor pathways, or sensory pathways; motor neuron disease; sensory

peripheral neuropathies; motor peripheral neuropathies; brain injury; and spinal cord injury resulting from one or more of trauma, hypoxia, and vascular disease.

44. (New) A method according to claim 34, wherein said neuro-active peptide additionally has vasoactive effects, dilates cerebral arteries, or increases renal blood flow.

45. (New) A method according to claim 34, wherein said neuroactive peptide comprises one or more D-amino acids.

46. (New) A method according to claim 39, wherein said neuroactive peptide comprises one or more D-amino acids.

47. (New) A method according to claim 34, wherein said neuroactive peptide comprises one or more non-naturally occurring amino-acids, and amino acid analogues.

48. (New) A method according to claim 39, in which the neuroactive peptide comprises one or more non-naturally occurring amino acids, and amino acid analogues.